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ABSTRACT

Practical strategies for administrative education faculty involved in principal preparation programs are compiled in this guidebook. This unit in an instructional leadership series focuses on curriculum development and implementation, with a secondary focus on curriculum evaluation. Stages of the process include evaluation, planning, development, and implementation. The elements of effective curriculum implementation and problems in implementation are also discussed. Three figures are included. (19 references) (LMI)

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PROFESSORS OF SECONDARY SCHOOL ADMINISTRATION AND SUPERVISION (PSSAS)

INSTRUCTIONAL LEADERSHIP SERIES

ED327962

CURRICULUM DEVELOPMENT

ALLAN A. GLATTHORN

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Introduction to the Series

The Instructional Leadership Series was developed by the Committee of Professors of Secondary School Administration and Supervision (PSSAS) of the National Association of Secondary School Principals to serve as a resource for professors engaged in preparing principals and other school administrators. It is not a curriculum guide, nor a text for instruction. Rather, it is a compilation of practical strategies and procedures that any professor may use in college courses and training sessions for aspiring or practicing school administrators.

Topics for this series were chosen by PSSAS Committee members, using a priority grid process, from among the range of subjects treated in NASSP's *Instructional Leadership Handbook* (J.W. Keefe and J.M. Jenkins, editors, 1984).

All principals, and particularly middle and high school principals, feel the mounting expectation to serve as the instructional leaders of their schools. The education community, state and federal policymakers, and shifting community and board demands place matters of teaching and learning squarely on the principal's desk. Supervision, staff development, curriculum development, planning, and program evaluation are now indisputably the bailiwick of the principal. Teachers' instructional performance—and student outcomes—are shaped by the principal's leadership.

This perspective on the principal's growing importance and function shifts the sands of university courses, internships, textbooks, and other preparation experiences. College and university professors experience new demands on their teaching; demands to prepare principals with broader technical knowledge as well as with newly understood conceptual tools for leadership and pedagogical improvement. Inevitably, professors discover need for restructured courses, reconceived field-based experiences, and resources for retooling their work with current and future principals.

The Instructional Leadership Series responds to this need for newly conceived resources. It is the product of a multi-year project begun in 1986. The series modestly proposes to relay useful ideas to professors and others who are engaged in the education and development of principals. Although many of the units and ideas in the series are familiar, all are written with the principal's instructional leadership function in the forefront. Written and reviewed by other professors intimately involved in principal preparation, each unit in the series aims to assist professors in preparing men and women wise to the complexities and joys of the teaching-learning process.

Fenwick W. English, professor and chair of educational administration at the University of Cincinnati, and John M. Jenkins, director of the P.K. Yonge Laboratory School at the University of Florida, served as designated reviewers of this manuscript.

The PSSAS Committee invites the reader to use the ideas and procedures in this unit. It is packaged to permit easy integration into existing practices and to encourage further reading and planning. The Committee welcomes suggestions from NASSP members and other users of the series for additional topics of interest.

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Curriculum Development

The field of curriculum is a large and complex component of the general discipline of education. Typically, graduate courses in curriculum, depending on the level of study, cover these broad areas: theory of curriculum, history of curriculum, sources for the curriculum, curriculum development and implementation, and curriculum evaluation. This unit focuses on the development and implementation of curriculum, with some attention paid to evaluation as a stage in the development process.

Attaining Conceptual Clarity

At the outset of a course dealing with curriculum, professors should spend some time clarifying key concepts in the field. Three tasks are particularly important: to clarify the general concept of curriculum; to distinguish between the several levels of curriculum work; and to identify the components of the curriculum.

The Concept of Curriculum

Every textbook author and most professors have their own definitions of curriculum, but it may be useful to spend some time examining and contrasting definitions to tease out their assumptions and biases. One simple definition is this:

> *Curriculum* is what the school expects students to learn and how those expectations are actualized in the classroom and other learning environments managed by the school. (Fielding, in press.)

Levels of Curriculum Work

Again, one could point to differences in professional opinion, but the following levels are suggested for analysis and discussion.

1. *Program of studies.* The complete set of educational experiences offered at a particular level of schooling—elementary, middle, and high school. The program of studies is usually described in a booklet distributed to faculty, students, and parents.
2. *Field of study.* A subject area or discipline usually extending over several years of study. In most school systems the fields of study encompass such standard disciplines as English, mathematics, and so on. Throughout educational history, educators have attempted to reconceptualize the fields of study, emphasizing new alignments of learning that either ignore or minimize the standard disciplines. One such current effort is Adler's (1982) Paideia proposal that would provide a common program for all students, eliminate vocational education, and relate each subject area to one of three modes of learning.
3. *Course.* A set of organized learning experiences, lasting for several weeks, a term, or a year, for which the student (usually) receives academic credit. A course is a part of a program of studies and usually of a field of study.
4. *Unit.* A subset of a course. A unit is an organized set of learning experiences offered as part of a course, and typically lasting from one to three weeks. It is usually bounded by an introductory lesson and a unit examination.

This discussion will focus on the field of study, with some treatment of the course and the unit. Designing a program of studies, of course, involves very different processes.

Components of the Curriculum

The analysis of the several components of the curriculum above is intended to remind professors that a vast difference exists between the *written* curriculum and the *learned* curriculum (and other components as well). Goodlad (1979) was probably the first to call attention to these distinctions. He used these terms: the *ideological* curriculum (the ideal curriculum as construed by scholars and teachers); the *formal* curriculum (the one officially approved by state and local school boards); the *perceived* curriculum (what teachers, parents, and others

think the curriculum to be); and the *experiential* curriculum (what the learners actually experience).

For purposes of simplification, we suggest the following terms:

- *Recommended curriculum.* The recommended curriculum includes those models proposed by individual scholars, professional associations, and reform commissions. A recent example is Bennett's (1987) *James Madison High School.*
- *Written curriculum.* The written curriculum is the one embodied in approved state and district curriculum guides. The written curriculum seems primarily intended to ensure that the educational goals of the system are accomplished. It is essentially a curriculum of control.
- *Supported curriculum.* The supported curriculum is that reflected in and shaped by the resources allocated: time, personnel, texts, and other learning materials.
- *Taught curriculum.* The taught curriculum is the one actually delivered in the classroom—what an observer would see being taught. In many schools, the taught curriculum is widely divergent from the written curriculum (Cusick, 1983). In some school districts, administrators have attempted to ensure closer congruence through processes described as "curriculum alignment."
- *Tested curriculum.* The tested curriculum is the version reflected in teacher-made unit tests, in district-developed curriculum-referenced tests, and in standardized tests. The research in general suggests that the fit is not good between widely used standardized tests and other curricular components. (See, for example, Freeman et al., 1980.)
- *Learned curriculum.* The learned curriculum encompasses what the student understands and retains from the taught curriculum. Again, there are wide discrepancies between the learned curriculum and other components. Doyle's 1986 review of classroom management practices presents a compelling view of how students attempt to simplify the curriculum to make classroom life less demanding.

This outline of the components of curriculum suggests at least four questions that professors will want to pursue with students:

1. Why do such wide curricular differences exist in the United States?
2. How much curricular congruence is desirable? Should curriculum planners attempt to achieve total congruence, or is some divergence actually desirable?
3. If an administrator wishes to evaluate the curriculum, what components should be examined?
4. How can administrators work with teachers to ensure appropriate congruence of curricular components?

This paper will focus on the written curriculum, with some attention to the taught curriculum.

An Overview of the Curriculum Development Process

A field of study usually undergoes development as a cycle of recurring stages. Although this recursive process is conceptualized somewhat differently by each expert in the field, it is usually thought of as four interactive stages: evaluation, planning, development, and implementation. In presenting this conceptualization, professors should communicate a flexible view. There is no single correct way to do curriculum. Indeed, it could be argued that the only "right way" is a locally developed model that takes cognizance of such site-specific factors as the size of the district, required leadership roles and staffing, time and fiscal resources available, the nature of the students to be served, etc. A productive learning activity is to have students develop a process for their own or another familiar school district.

One possible formulation of the development process is outlined below. This model identifies four stages and the specific steps involved in each. Two points should be

emphasized. This process has been used successfully by the author in more than 100 school systems. It is a feasible and tested model. But it is by no means the best or the only model. Professors are strongly encouraged to critique the process, to develop alternate models, and to involve students in their own formulations.

Stages and Steps in Developing a Field of Study Curriculum Evaluation:

1. Determine the scope of evaluation and evaluation issues.

2. Develop the evaluation design, specifying issues, data sources, and data collection and analysis procedures.

3. Implement the evaluation design and analyze the results, identifying implications for curriculum planning.

Curriculum Planning:

1. Determine the scope of the project and the resources for accomplishing the tasks by analyzing the results of the evaluation process.
2. Appoint a task force to manage the project; provide needed training for task force members.
3. Formulate a detailed planning calendar, citing tasks, target dates, products, and responsible individuals.
4. Develop a curriculum knowledge base: current theory and research, recommendations of experts, reports and examples of exemplary practice, other available resources, and full information about students to be served.
5. From the knowledge base, identify any special emphases for the new curriculum and any special needs it will attempt to meet.
6. Orient all faculty members in the project about its goals, and teacher opportunities for input.

Curriculum Development—Scope and Sequence Chart:

1. Identify the goals for the field of study, emphasizing those that will be achieved through a structured curriculum.
2. Develop a framework for a scope and sequence chart; identify the strands of the curriculum (the repeating horizontal elements that together constitute the scope, and the grade or achievement levels that constitute the sequence).
3. Secure teacher input on the language and elements of the framework.
4. Provide staff development for all teachers on relevant research, theory, and exemplary practice.
5. Ask all teachers to identify for their grade levels the important skills and concepts to be included in the scope and sequence chart.
6. Collate all teacher survey data in a comprehensive chart.
7. Evaluate the framework by checking school standardized tests, state guidelines and testing, research on cognitive development, research in the target field of study, the recommendations of experts, the elements of rational progression, and the elements of needed reinforcement without repetition and duplication.
8. Develop a revised scope and sequence chart.
9. Ask teachers again to review the scope and sequence; make any changes recommended by most teachers.

Curriculum Development—Curriculum Guides:

1. Identify an acceptable format for "teacher-friendly" guides by interviewing teachers.
2. On the basis of the interviews, decide which of the following elements should be included in the guide: a summary of research; curriculum goals; philosophy and rationale; recommended time allocations; learning objectives; teaching/learning activities; recommendations for unit planning; student evaluation; teaching/learning materials; an evaluation form for teacher feedback.
3. Produce a guide incorporating these choices, drawing from and amplifying on the scope and sequence chart.
4. Conduct a preliminary evaluation of the guides, both by experts and by users.

Curriculum Implementation:

1. Develop curriculum-referenced tests.
2. Select texts and other instructional materials, checking closely on their fit with the guides.
3. Prepare alignment and planning aids for principals and teachers, showing the relationships of guides, tests, and materials.
4. Determine the processes and materials for monitoring the implementation.
5. Organize staff development activities for supervisors and administrators to help them assist teachers in the implementation stage and to carry out the monitoring plan.
6. Provide inservice for teachers prior to their use of the guides.
7. Offer continuing support and staff development for teachers while guides are being implemented.

The extended discussion below assumes that professors are generally conversant with the basic elements outlined above. We will call attention only to elements that seem especially noteworthy.

Curriculum Evaluation. Evaluation is an important component of the entire developmental cycle. Each major step in the process should be subjected to careful evaluation. Evaluation is presented here as a separate stage early in the cycle, but it actually should be ongoing. With a curriculum already in place, the process begins by evaluating how effective that curriculum is. One of three decisions is possible: 1) leave the curriculum as it is; 2) refine it by making some incremental changes; or 3) discard it and develop a new one. This unit is concerned with the development of a new curriculum. (A process for effecting incremental change is described in a 1988 article by this author.)

Several models have been developed for evaluating curricula. A useful introduction to some of those models can be found in Brandt's (1981) monograph. Several experts explain how they would evaluate a new program in humanities education. I would suggest a variation of Stake's (1975) model that has been used effectively with several school districts. In this "responsive" model, those responsible for the evaluation generate a comprehensive set of questions, with five types of curricula as a framework: the written curriculum, the taught curriculum, the supported curriculum, the tested curriculum, and the learned curriculum. Supervisors, administrators, and teachers are surveyed about which questions they believe require answers. The leadership team reviews the results and identifies the evaluation issues to be addressed. This approach produces a comprehensive but manageable set of evaluation issues.

Curriculum Planning. The planning process presented in the previous section is straightforward and rational. Perhaps only two steps require special discussion.

The first step, determining the scope of the project, involves decisions about three questions: 1) what grade levels will be covered, 2) what ability levels will be incorporated, and 3) what areas of that field will be included? Most projects encompass a K-12 range, but it is possible to focus only on the secondary level. Even if the project is secondary in emphasis, however, it is still desirable to begin with a K-12 scope and sequence chart. Then whatever is developed, say for grade 6, builds on a systematic foundation. The decision about ability levels will be affected, of course, by any grouping system used in the district. A practical solution is to develop a basic curriculum for all except the gifted and those in special education, producing supplements for these special populations after the basic program has been established. The question of areas to be covered involves decisions about whether to deal, for example, with all of English language arts, or only a part such as written composition.

The fourth step, developing a knowledge base, provides an informational foundation for the project. A knowledge base requires a comprehensive search of the literature for

current theory and research, the recommendations of experts, reports of exemplary practice, and available resources. The list of available resources should include publications and media helpful to planners, consultants and other experts, and the names of related organizations and interest groups. The intent here is to build local projects on a foundation of the best available knowledge.

Another component of the knowledge base is information about the students to be served by a new curriculum: their socioeconomic status, ethnic identity, ability and achievement, health, school activities, and interests. Evaluating the existing curriculum and assembling information about the students to be served involves planners in what is usually termed a needs assessment. Kaufman (1982) defines a needs assessment as a process that identifies gaps between what is and what should be. Kaufman's work identifies 17 needs-assessment models and can be a useful introduction to the topic.

The end product of assembling and analyzing the knowledge base should be a formalized set of specifications that identify for the task force the special emphases of the new curriculum and the special needs it will attempt to meet. An example of such a document is shown in Figure 1.

Curriculum Development: Scope and Sequence Chart. The actual development stage encompasses two related processes: developing a scope and sequence chart, and preparing curriculum guides. Producing the scope and

Figure 1

Specifications for a New Language Arts Curriculum

Scope of the project: K-12, with all ability levels except gifted and special education. Handwriting and reading will be covered in other projects.

Special emphases:

1. WRITING: Writing as a flexible process, with special attention to pre-writing and revising; most writing should be for real audiences, about real problems.
2. LITERATURE: Responding to literature at multiple levels; use of whole texts and real literature, not anthologies and basals.
3. GRAMMAR: Start no earlier than grade 7; give minimal attention to formal grammar; stress combining of sentences.
4. LISTENING AND SPEAKING: Use of oral language in classroom, cooperative learning, and discussion groups; some training in public speaking for high school students, with emphasis on job and college interviews.
5. CRITICAL THINKING: Emphasize thinking across the entire curriculum—critical reading, listening, and viewing, thinking in writing, and thinking in responding to literature.
6. MASS MEDIA: Emphasis throughout the curriculum, with special attention to television.

Special needs:

1. Approximately 15 percent of the students use English as a second language and will need some assistance from all teachers.
2. Approximately 20 percent of the students are reading two or more grades below level.
3. Approximately 15 percent of the students come from lower socioeconomic status homes and have not fully mastered the standard English dialect.

sequence chart *first* seems to work better. The chart becomes a map for the writers of the guides. (It is also possible to produce the guide and then develop the scope and sequence chart from the guide.)

The scope and sequence process should begin with the identification of goals for the field of study. The term *goals* usually means general long-term outcomes that can be achieved only after several years of schooling. Thus, one goal of social studies is to develop the qualities of good citizenship. Curriculum goals can be derived from the district's statement of educational goals, using a process that has been described in a recent (1987) work by this author, or the task force can develop them by reviewing the knowledge base. The goal statements help planners and teachers to focus attention on long-term outcomes and not to become obsessed with details.

The second step in the process is a framework for the scope and sequence chart. The difficult task here is identifying the strands—the horizontal elements of the chart that together constitute the scope of the field. The best place to start is with the professional knowledge base, checking especially the publications of field-related groups. Schlaadt (1988), for example, uses the following strands in describing his recommended health education curriculum: accident prevention and safety; community health; consumer health; environmental health; family life education; mental and emotional health; nutrition; personal health; prevention and control of disease; substance use and abuse. After reviewing expert opinion, it is even more important to establish that the strands make sense to teachers. Teachers should be asked to review the framework before it is adopted.

Another key step is providing staff development for all teachers who will use the new curriculum. The purpose of staff development at this stage is to update teachers' knowledge of the field so that their reviews of the framework will represent an informed judgment. The task force can assist by producing a synthesis of current theory, research, and practice from the knowledge base.

The following is one practical and effective way of getting teacher input on what should be taught at each grade level.

1. Prepare "curriculum mapping" forms. The mapping forms should include the synthesis of the knowledge base and one blank page for each strand of the curriculum.
2. Schedule a special faculty meeting. Ask teachers to bring their plan books, textbooks, standardized and curriculum-referenced tests, and any other materials they use in planning.
3. Orient teachers about the importance of the task and the processes that will be used. Ask each teacher to work individually, identifying the important concepts and skills that he or she thinks *should* be emphasized at the grade levels representing the teacher's primary assignment. Note the emphasis on what teachers think *should* be taught. Some in the field map by asking teachers to report what they actually teach. The intent here, however, is to develop an improved curriculum that reflects informed knowledge, not simply to catalog current practice.
4. Arrange for teachers to meet in grade level groups, to share the results of their individual work, and to reach a consensus for that grade.
5. Collate and display the results of this process on a large wall chart and reproduce it in a booklet.
6. The draft of the scope and sequence chart should be reviewed critically by the task force, by expert consultants, and by district supervisors and administrators. The review should take into account both external constraints and the best of current knowledge about the learner and the subject.
7. The revised draft should be subjected to one final review by teachers, to ensure a true consensus.

A few additional issues are worthy of mention at this point.

First, there is some diversity of opinion on the issue of detail. Some experts advocate very explicit charts that list all the specific grade level objectives in the greatest detail. The

preference of this author is to include only very general concepts and skills, saving the details for the curriculum guides. A more general chart is much easier to use. In a few minutes, administrators or teachers can discern how general outcomes are developed grade by grade.

A second and related issue is whether the scope and sequence chart should indicate *when* skills and concepts are introduced, emphasized, and reviewed. (Guides frequently use the abbreviations *i*, *e*, and *r* to note these designations.) It seems more useful to note on the chart only when concepts and skills are *emphasized*, assuming that they may be introduced when appropriate and reviewed as necessary. This approach results in a less cluttered chart. (The professor and students may wish to discuss the pros and cons of this decision.)

Finally, the professor should caution students against relying on scope and sequence charts produced by most textbook publishers. These charts are really sales tools and often misrepresent what the texts actually include. Relying on a publisher's chart also permits the text to drive the curriculum, a practice that all experts understandably decry.

Curriculum Development: Curriculum Guides. The next phase of the development process is to produce the guides themselves. The major concern is to produce guides that are easy for teachers to use. Rather than champion some ideal format that attempts to be comprehensive and succeeds in being nothing but voluminous, the guide should contain only what teachers believe would be useful. Some guides include only grade-level objectives, and rely on staff development to help teachers choose effective learning activities and valid assessment measures. Others, however, are very com-prehensive, including most of the elements noted above. This difference should be discussed, since experts in the field hold contrary views.

Two other issues also need special comment: instructional units and time allocations.

The first issue involves whether the guide should be organized as a series of instructional units or simply as lists of related objectives. Some districts organize the guides into units, placing a great deal of value on the systematic integration of objectives. Other districts give teachers more latitude in classroom planning as long as they incorporate all the designated objectives. Professors may wish to emphasize the importance of unit *planning* when this issue is discussed. Clark and Peterson's (1986) review is very helpful here.

Research has established that the way time is allocated affects what is learned. Left to their own devices, teachers may make unwise decisions about the use of time. It is essential that curriculum developers and supervisors make clear recommendations about curricular priorities and the allocation of time. How much time in history, for example, should be given to a unit on explorers; how much time to the war in Vietnam? There are several acceptable ways to convey these recommendations: on the scope and sequence charts; in the curriculum guides; in separate guidelines; or in staff development activities that help teachers make informed decisions. The pros and cons make a good class discussion.

One useful instructional activity in a general curriculum course is to require students to develop criteria for evaluating the written curriculum (both scope and sequence charts and curriculum guides) and then to use these criteria to evaluate a locally produced guide. Most standard texts in the field either specify criteria or suggest what the desired attributes should be.

Curriculum Implementation

The final stage, curriculum implementation, is a crucial one. Too often, students believe that producing the curriculum guides completes the task. Research suggests otherwise. Unless steps are taken to introduce the guides carefully, teachers will continue to teach what they have taught before, consigning the bright new guides to the files. The

discussion that follows reviews the general research on change process and treats some specific problems to be solved during curriculum implementation.

The Curriculum Change Process

Most experts in organizational change posit four distinct stages, but they use somewhat different terms. The following discussion draws chiefly from Herriott and Gross (1979).

- *Strategic planning stage:* Planning for the project, when major decisions about project design and development are made. This stage has been discussed above.
- *Initiation stage:* The "lift-off" stage of the new project, when the new curriculum is introduced.
- *Implementation stage:* The stage when widespread adoption occurs, with almost all teachers using the new materials.
- *Institutionalization stage:* The final stage, when the new materials become a stable and enduring part of the school/district program.

The implementation and institutionalization stages are so important that they require very careful analysis. Two bodies of research are useful here. Figure 2 summarizes the important findings on implementation, drawing heavily from an excellent synthesis by Fullan and Park (1981). Figure 3 summarizes the findings of Miles (1983) on successful institutionalization. Both sets of findings should be examined carefully and openly.

Figure 2

Elements of Effective Curriculum Implementation

A high level of curriculum implementation can be expected if...

1. Teachers perceive the need for the new curriculum;
2. Curriculum changes are not unduly complex and are clearly explained to teachers;
3. Good materials supporting the new curriculum are made available to teachers;
4. Previous attempts in the district to change curricula have been successful;
5. Principals take responsibility for ensuring that teachers implement the curriculum;
6. Teachers have substantial input in the development of the new curriculum and are given the needed training;
7. Strong school board and community support exists;
8. A carefully developed implementation plan makes specific provision for monitoring progress;
9. Administrators prevent or respond to the problems of "overload" when teachers feel overwhelmed by the new project;
10. Principals play an active role in supporting the new curriculum;
11. Teachers have the opportunity to share ideas and problems with each other and with supervisors and administrators.

(Adapted from Fullen and Park, 1981.)

Figure 3

Variables Affecting Successful Institutionalization

1. Strong and continuing administrative commitment to the change.
2. Administrative mandate of the innovation for all teachers.
3. Strong administrative pressure on users to implement.
4. Organizational changes to support the innovation.
5. Consistent administrative support for users.
6. Increased user effort resulting from administrative pressure and assistance.
7. Increased user commitment resulting from increased user effort.

(Adapted from Miles, 1983.)

Note that Miles' research calls into question some of the conventional wisdom that warns leaders not to put pressure on teachers to change. Miles concluded that strong administrative pressure is required for institutionalization, but the issue is complex. Students should be encouraged to examine other models and research about these processes.

As a general reference, professors may wish to direct students to the "concerns-based adoption model" developed by Hall and Loucks (1981). This model emphasizes how teacher concerns shift during the change process.

Specific Problems During Implementation

Earlier, we outlined some important steps to be taken during the implementation stage. The discussion that follows dwells briefly on each of the major steps.

1. *Curriculum-Referenced Testing.* After a curriculum guide has been revised and prepared for dissemination, appropriate curriculum-referenced tests should be developed, along with policies on the frequency of testing and use of test results. If all students have had courses in tests and measurements, the professor may simply wish to review the procedures for developing sound tests. A useful reference here is Patton's (1982) book, *Practical Evaluation.*

2. *Curriculum Alignment.* Curriculum alignment ensures that the written, the supported, and the tested curricula are reasonably congruent. If the processes above have been followed, there should be reasonable congruence between the written and the tested curriculum. When textbooks are selected to match the written and taught curriculum, the alignment process is a relatively simple one. Principals and teachers will need alignment guides only to determine where each objective is covered in the text and assessed in the tests. Other resource materials such as media and computer software, of course, should also be aligned.

3. *Curriculum Monitoring.* Curriculum monitoring determines whether or not a new curriculum is actually being used and teachers are making appropriate allocations of time. Some districts rely solely on the results of curriculum-referenced tests, accepting student achievement as the best evidence of effective implementation. Other districts require supervisors and administrators to make brief "walk-through" observations to confirm that teachers are using a new program. Some districts ask teachers to submit yearly, semester, and/or unit plans detailing how they will deliver a new curriculum. Others require retrospective reports in which teachers summarize the objectives they have covered. Professors should advise students that monitoring is a sensitive issue for teachers and that administrators should be fully involved in deciding how it will be accomplished.

4. *Staff Development.* Several kinds of staff development will be needed during implementation of a new curriculum. Supervisors and administrators will need guidance in supporting teachers who are using the new guides. Teachers will need systematic training in actually using the curriculum and time during the first year of use to meet together, to discuss common problems, and to share solutions.

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